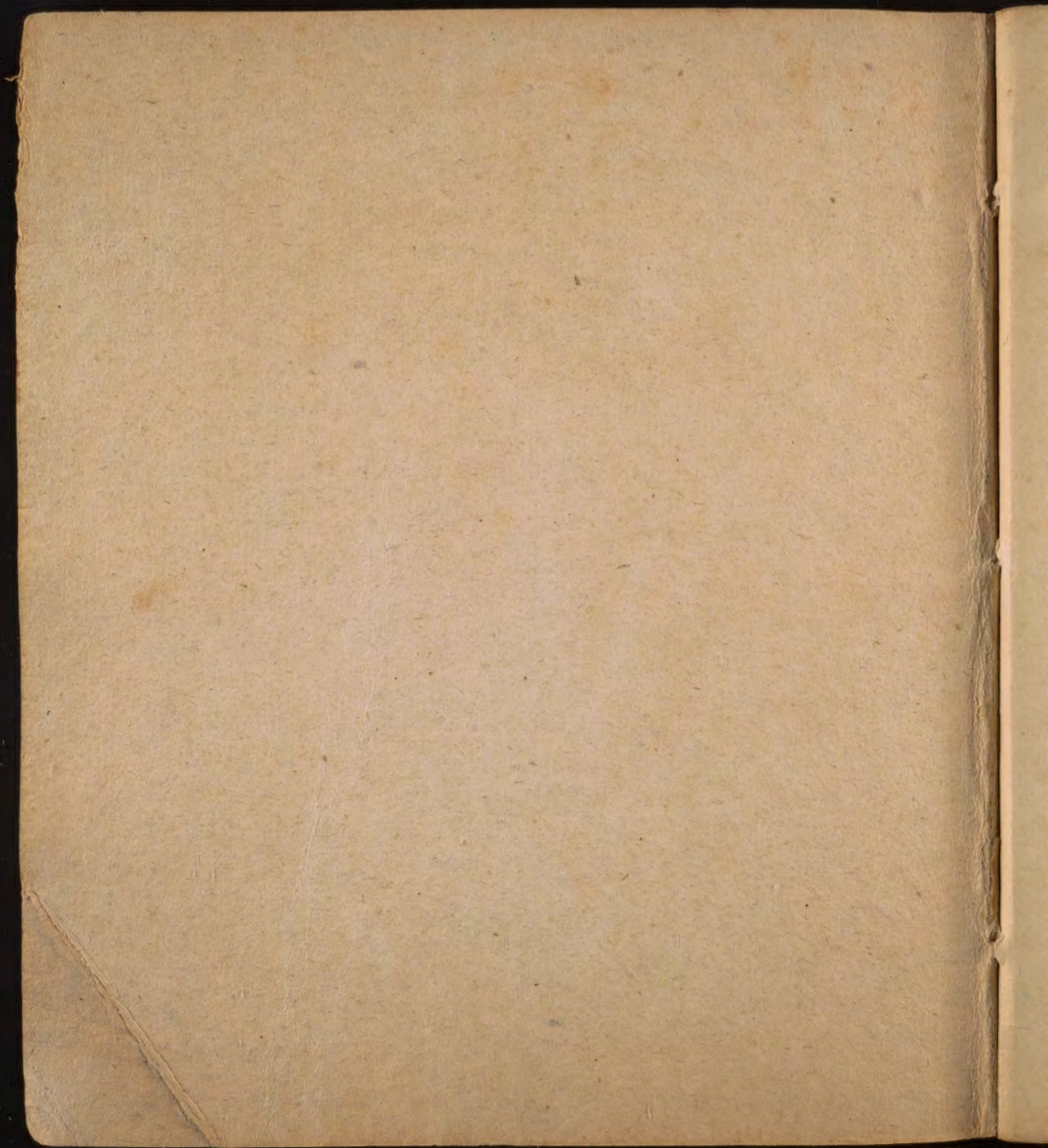


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12







of Local Diseases  
of the black color of the  
Africans. — 505

of the proximate cause  
of Death 525



✓ But again - The diseases of the same systems differ materially in their degrees.

& 9: There is a febris & febricula - There is  
 Rheumatismus & Rheumaticula  
 Pneumony & Pneumonicula in the Lungs.  
 Pharyngitis & Pharyngicula - or acute & chronic Detention  
 system - There is involuntary motion, and  
 motion <sup>in its duration</sup> ~~is~~ contrary only to the will - There  
 is Dysentery & Dysentericula in the Alimen-  
 -tary canal - There is Hepatitis acuta and  
 chronica - There is leuc & gonorrhoea in the  
 Lymphatic system & There are the <sup>external</sup> ~~isotom~~ &  
 internal measles - & so on in all the other  
 Systems. In each of these, the disease is limited  
 so closely to the system affected, & acts on it  
 so fully, <sup>not to confine</sup> as to allow the patient to his bed.

Lastly - Diseases exist in one part of the  
same System, and produce their largest  
I have seen Abscess in lungs only, in <sup>a Rheumatism.</sup> health. Asthma  
only in another. The debility of fatness is  
seated in the Foot, & yet it appears <sup>first</sup> in the



Yet keep within the limits of the  
domain formerly assigned to them.

3 The Diseases of the Stomach & Bowels  
often exchange locations.

4 The affections of the skin particularly  
Sores - and tetters of all kind <sup>frequently</sup> ~~are~~  
appear in different seasons in diff<sup>t</sup>  
parts of the body. —

5 ~~the~~ most of the diseases of the glands  
are disposed frequently to change their  
places, more especially Dropsies.

The diseases of the two last systems  
which I have described, ~~both~~ afford  
no instances of metastasis such as have  
been mentioned. ✓

with this we finish the general



week. Weak lungs excite a <sup>vomiting</sup> ~~cough~~ <sup>a</sup> ~~cough~~  
 a weak stomach a cough —  
~~weak~~ — and a stone in one kidney has in  
 one instance produced pain only in the  
 other.



diseases. I have done little more than  
 named them. But I have <sup>said</sup> ~~delivered~~ <sup>into</sup>  
 to open a new field of observation to  
 your attention. The more you view  
 general diseases thro' the medium of the systems  
 which I have enumerated, the more  
 definite & precise will <sup>be</sup> your ideas of  
 them. Endeavour to find out new  
 relationships between them either <sup>these</sup>  
~~foreign~~ between different systems, or remote  
 parts of the same system. One great  
 advantage will arise from increasing  
 this species of knowledge - it will lead  
 to the more certain & successful use  
 of many Remedies - for they act as  
 certainly on specific systems, as those  
 systems act on each other. ~~The~~ From a







504 the remote & proximate  
review of what has been said of general  
causes of  
Diseases - I presume no one will now  
deny the truth of <sup>the leading</sup> the following propo-  
-sitions. ~~That~~ of Our pathology.

1 That debility is the universally predi-  
-posing cause of all general diseases.

2 That ~~irregular~~ increased or morbid  
excitability is the universal effect (when  
recent) of ~~deb~~ previous debility.

3 That <sup>irregular or morbid</sup> ~~irregular~~ <sup>or morbid</sup> ~~action~~ - or in other  
words, a want of order in <sup>animal</sup> motions is  
as to ~~time~~ <sup>time</sup> ~~place~~ <sup>place</sup>, constitutes  
the proximate cause of all the general  
diseases of the Sensitive & irritable parts  
of the body.

4 That the great Secret of medicine, and  
the first consists in the knowledge



V 5 That the multiplication of diseases <sup>which</sup>  
are the effects of one or at most, of two  
original causes <sup>resembles</sup> ~~is~~ polytheism in <sup>religion</sup> medicine.  
The physician who considers every different  
affection of the different systems, or ~~differs~~ every  
affection of different parts of the same system,  
as a distinct disease, resembles the Indian, or  
the new negro who considers water - dew -  
Ice - snow - and frost as distinct essences,  
while the physician who considers disease  
as <sup>an excited</sup> ~~a~~ <sup>part of</sup> state of the system only; and <sup>as</sup> derived from  
only one cause, viz: debility, resembles the  
philosopher who considers ~~ice~~ dew - <sup>water</sup> ice - snow  
& frost as different states of water, <sup>only</sup> and <sup>as</sup> all  
derived from one cause, <sup>viz:</sup> the absence of heat.

Having finished gen<sup>l</sup> diseases, I should



System<sup>ch</sup> is 595  
of the part affected - of the force, or degrees  
~~of the force, or degrees~~  
of ~~irregular~~ ~~or morbid~~ action in it - and  
the choice of the remedy suited to the system which  
afterwards in ~~a~~ the exact accommodation  
is affected & in force  
of ~~a remedy~~ the ~~remedy~~ of that remedy, to  
that action the degree of morbid action.

Lect: Feb: 28. 1793.

we come now to speak of the  
causes of partial or local dis-

ease. — of a Physician  
The first thing which strikes the eye  
in contemplating the human ~~eye~~ body,  
is the variety <sup>in the</sup> of color <sup>& features</sup> which <sup>is</sup> observable among  
the different nations <sup>ch</sup> inhabit our  
globe. This variety must be the effect  
of disease, for there can be no doubt  
but the whole human race must  
have been derived from one pair, &



proceed to treat of their general consequences viz:  
disorders. I say general consequences, for there  
may be disorder in a part which has not  
been preceded by disease or morbid excitement.

There is likewise frequently a mixture of  
disease & disorder in the same part as inflam<sup>n</sup>.  
& Suppuration or phirrus in the liver ~~disorder~~  
morbid excitement & inflam<sup>n</sup>. & hemorrhage.

The usual consequences of morbid excitement  
or disease are 1 Inf<sup>n</sup> or effusion <sup>& circulation</sup> of red & white  
into serous vessels - 2 hemorrhage <sup>or effusion</sup> - 3 Effusion  
& stagnation of Serum - Coagulable - and  
red Blood - first ends in resolution 2 & 3<sup>d</sup> in  
Suppuration - all 3 in congestion like gangrene.  
4 gangrene - or loss of power of emitting life  
from great force of action in any part. These  
are <sup>the</sup> acute effects of disease. Chronic effects are  
tubercles - phirri - <sup>& tumors of all kind - cancers</sup> ossification & calcareous  
matter - Dupuy's swellings - ~~cancers~~ <sup>or</sup> many  
of them are not preceded by morbid action.



This pair must of course been only  
 of one of those colors. — The original  
 color it has been supposed was the  
Olive <sup>inclining to the</sup> — all the others are deviations from  
 it produced by accidental circumstances  
~~to be mentioned hereafter~~ which are  
 fully enumerated by Dr Smith in his  
 learned & ingenious essay upon this  
 subject. ~~The~~ <sup>four</sup> principal causes of  
 the variety of color and feature in the  
 human body mentioned by Dr Smith  
 are 1 Climate - 2 Diet - 3 state of society,  
 and 4 Disease. I fully adopt the Dr's  
 reasonings upon the physical influ-  
 -ence of each of <sup>these causes</sup> ~~these~~ on the skin and  
 face, and will add further ~~that~~ the in







favor of that work, that it has always appeared to me to be one of the most acute and profound essays that ~~has~~ I have ever met with upon a medical subject. Perhaps it is the better from the ~~ignorance of~~ <sup>ignorance of</sup> ~~any theories of~~ <sup>any theories of</sup> ~~medicine~~ <sup>medicine</sup>, some one of which perhaps might have misled him from the track <sup>ch</sup> ~~w~~ conducted him with so much success & honor to the end of his inquiries.

Ingenuous as this work is - it has not solved all the difficulties upon the subject of the <sup>variety of</sup> color & features of the human race - Altho it has laid a solid foundation for its <sup>being</sup> ~~done by~~ <sup>done by</sup> others. — If the <sup>variety of</sup> ~~color~~ <sup>color</sup> ~~be~~



The first of these is the fact that the  
 human mind is not a blank slate at birth.  
 It is filled with a vast amount of  
 information that it has acquired from  
 its environment. This information is  
 stored in the memory and is available  
 for use when needed. The second fact  
 is that the human mind is capable of  
 learning from experience. It is able to  
 take in new information and to  
 integrate it with the information already  
 stored in the memory. This process of  
 learning is what allows the human  
 mind to grow and to develop. The third  
 fact is that the human mind is capable  
 of reasoning. It is able to take in  
 information and to use it to make  
 logical conclusions. This process of  
 reasoning is what allows the human  
 mind to solve problems and to make  
 decisions. The fourth fact is that the  
 human mind is capable of feeling. It is  
 able to experience emotions and to  
 express them in various ways. This  
 process of feeling is what allows the  
 human mind to connect with other  
 people and to form relationships. The  
 fifth fact is that the human mind is  
 capable of creating. It is able to take  
 in information and to use it to create  
 new things. This process of creating is  
 what allows the human mind to  
 make progress and to improve the  
 world.



color & features be produced by the <sup>4</sup> causes  
 which have been mentioned, it has  
 been asked why <sup>they</sup> do not ~~these~~ disappear  
 as soon as the above causes have ceased  
 to operate. This is so far from being  
 the case, that a negro retains his color  
 for <sup>a</sup> century after being rescued from  
 the heat of the sun - from unwholesome  
 diet <sup>from</sup> - <sup>from the diseases</sup> savage society and ~~bilious dis-~~  
 which have been supposed to be most  
 instrumental in producing his  
~~his~~ black color. - To this remark there  
 is a small <sup>exception, for</sup> ~~objection~~ - a considerable  
 shade of the black color always dis-  
 appears ~~under the above change of~~







~~Circumstances~~ in two or three generations, and the features seldom fail of becoming regular in the 3<sup>rd</sup> generation under the above change of circumstances.

To account then for the duration of a preternatural color in the skin after the causes which induced it cease to operate, I need only remind you of a fact mentioned formerly, & that is that <sup>the qualities of</sup> ~~the change in the color of the~~ skin are the most transmissible to posterity of any peculiarity of the body, and the least liable to be affected by time or external circumstances. —

✓ as well as in the state of horticulture  
- agriculture - building, & cloathing, by  
which ~~are~~ the great sources of marsh  
& human miasmata were dried up.



But the deep black color ~~used~~ the big  
lips and the flat nose - and the wooly  
head of the negro, require a specific  
 theory to explain them. I shall offer  
 one which I hope will be satisfactory.

I formerly took notice of the influence  
 of diet, ~~and~~ manners & the state of society  
 in producing diseases of the skin, and  
 ascribed the decay of Elephantiasis -  
 & Leprosy to the change in the diet, and  
 employments of mankind by the  
 revival of letters & the change in the  
 political state of ~~the world~~ <sup>Europe</sup> in the  
 14<sup>th</sup> & 15<sup>th</sup> Centuries. During the prevalence  
 of the prevalence of  
 of unwholesome diet - & savage manners,

of morbid  
V probably by a translation of and  
action, & an effusion of morbid humors in the skin  
disposition of black bile to the rete  
mucosum, for the bile if it is well  
known sometimes imparts a black color  
to the blood, <sup>in biliousness</sup> and also to the whole skin  
in that disease which is known by  
the name of the black jaundice. now this



A bilious disease among a people  
 who inhabit a hot country, it is  
 easy to conceive that a disease may  
 have been induced upon the skin which  
 we call the Leprosy, <sup>by means of a meta-</sup>  
~~stasis formerly hinted at,~~ and when once  
 produced in a few families might  
 have spread over a <sup>considerable</sup> part of the  
 globe. — To this Leprosy — I ascribe  
 the color of the negroes. my reasons

for this opinion are as follow.

The Leprosy is accompanied  
 1 ~~It is the~~ <sup>with</sup> ~~the~~ <sup>of</sup> ~~the~~ <sup>a</sup> ~~the~~ <sup>black</sup> ~~the~~ <sup>color</sup> ~~to~~ <sup>to</sup> ~~the~~ <sup>of</sup> ~~the~~ <sup>skin</sup> . of  
 = stains, a black color to the skin. of  
 this I have lately met with a most  
 satisfactory proof in Dr. Thiers's  
 Account of the diseases of Astoria

Handwritten text in a cursive script, possibly a signature or a short note, written in brown ink. The text is difficult to decipher due to the cursive style and fading.



in Spain. I shall give You a translation of his own words upon this subject. "There are says he above 20 hospitals for Lepers in this province - and I have observed six species of the disorder. The 2<sup>nd</sup> species is called the black Albasas of the Arabians. The skin becomes black - thick - & grisey. There are neither pustules - nor tubercles, nor scales nor any thing out of the way on the skin. The body is not in the least emaciated - The breathing is a little difficult, & the countenance has some fierceness in it. They exhale perpetually a peculiar & disagreeable smell, which I can compare to nothing

✓ This small mentioned by Dr Shury con-  
with a small modification  
sists in the Native African to this  
day.

† Mr Hankins takes notice of this  
in his travels into the interior part of  
Africa. † They possess the features of the  
negro. Mr Hankins has <sup>further</sup> described them  
in the following words. "This hairse  
p. 116 - also 117-118. - This artful Imelles  
does not stop here - the idea of its being a  
disease, and its specific nature did not  
escape him - hence he adds - "This  
whiteness does not mark the skin is com-  
mon in Java, Panama where it is perpetuated this many  
generations. A diversity frequently occurs  
changes equally great in the symptoms  
of many other diseases. The same state of  
malignant bilious fever is often marked  
by <sup>opposite colors in the</sup> black and white stools - by opposite



but the smell of a mortified limb! -

- ~~but the~~

2 This The Leprosy is described in the  
<sup>by ancient writers</sup> ~~Old testament~~ <sup>universal</sup> as imparting a <sup>perman-</sup>  
 = ternal whitening to the skin. This white-  
 = ness is sometimes in spots, & again it

extends over the <sup>Persons</sup> whole body. Crow  
 thus marked have <sup>lastly</sup> been called Albinos. +

~~The progress in every part of the body~~  
 It sometimes appears ~~marked~~ with blacky  
~~often exhibits these phenomena~~  
 spots. A picture of a negro in Virginia ~~mentions~~

~~Thamheavorth in his voyage~~ <sup>as</sup>  
~~present in whom this mixture of white & black~~  
~~found in various of them.~~ Mr. Seale ~~has~~  
 had taken place has been happily preserved by  
 preserved in his museum. ~~The picture~~

of a negro with white spots on his  
 skin. - ~~3 the leprosy is attended with big~~  
~~lips flat nose &c.~~

3 The leprosy induces a morbid insensi-  
 = bility in the nerves. In countries where  
 the disease is common prevails it is

temperature of the skin, & by opposite states  
of the alimentary canal.

The original connection of <sup>the</sup> ~~this~~ <sup>further</sup>  
black color of the negroes with Leprosy is suggested  
by the following fact extracted from Mr  
Bougainville's Voyage &c



common to say ~~now~~ that a person  
devoid of sensibility has no more  
feeling than a ~~leper~~ leper. I formerly  
mentioned a fact from De Morely  
of the indifference <sup>to</sup> which negroes  
submit to operations in surgery in  
the West Indies. Even in this country  
the negroes have been observed to handle  
fire without an emotion, and <sup>to</sup> not  
suffering from it like white people.  
Lepers are remarkable for having  
strong venereal ~~diseases~~ diseases. This is  
universal among the negroes. - hence  
their <sup>uncommon</sup> fruitfulness where they are not  
depressed by Slavery. In Slavery





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does not subdue the appetite, for  
~~we~~ After whole days spent in hard  
labor in a hot sun in the West Indies,  
we are told the negroes will often  
walk five or six miles to <sup>comply with</sup> ~~get~~ <sup>get</sup>  
a renewal of pignation. —

5 The big lips & flat nose <sup>are symptoms</sup> ~~belong to the~~  
Leg of the Leprosy. They are taken notice  
by all authors. I have <sup>more than</sup> ~~once~~ <sup>seen</sup> them  
in the Pennsylv: hospital. —

6 The woolly <sup>heads of the negroes</sup> ~~heads of the~~ cannot  
be accounted for from climate - diet  
state of society, or bilious diseases - for  
~~none~~ all those ~~can~~ causes when  
combined have not produced <sup>it</sup> ~~them~~  
in the natives of Asia or fourth





who inhabit mountain fastnesses.

America, & wool is peculiar to the  
negro. I see then many proofs of similarity  
of the ~~leprosy~~ symptoms of leprosy, and  
of the peculiarities in the negro body  
tell me - but there is one fact in  
the history of the leprosy that may  
throw some light upon it. The Tricho-  
ma or plica polonica so common  
formerly in Poland ~~is~~ <sup>is a</sup> was <sup>symptom</sup> ~~affairs~~  
of leprosy. It affected the hair only,  
in a peculiar manner. From this  
fact it would seem that the leprosy  
had found its way to <sup>the covering of the</sup> ~~that part of the~~  
head in negroes  
~~body~~, & from the variety of its effects  
on the skin, it is <sup>as</sup> probable it may  
have produced a ~~wool~~ wool in

a note

✓ It affects before it appears  
as in a family in madras.  
A lady of a dysentery family married,  
- all her children took the disease  
at 16 & died. Her husband then  
took it & died, & finally the disorder  
appeared in herself - of which  
she died.



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this case as matted hair in the case of  
the Poles.

But how shall we account for the  
long duration of this color of the skin  
thru so many generations & even  
ages? I answer; that the Leprosy  
is the most durable disease in its  
descent to posterity, & the most indestruc-  
-tible in its nature of any disease we  
are acquainted with. Dr Feilard  
Dr Foil says it often disappears in  
two - and appears in the 4<sup>th</sup> genera-  
-tion - But 2<sup>nd</sup> no more happens  
here than what happens to many  
nations who  
~~generations~~ are distinguished by  
a peculiarity of figure of any part





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of the body. The ~~ancient~~ Scotch people  
who inhabit the Highlands, have the  
same ~~color~~ <sup>red</sup> ~~coloured~~ hair & the same  
high cheek bones which are ascribed  
to their ancestors by Tacitus ~~after the~~  
Invasion of Britain. The even the tumour  
in the throat in the Cretins who inha-  
bit the Alps are transmitted from father  
to son thro' a long succession of generations.  
Scrophulous & consumption in like manner  
are hereditary in many families, <sup>both</sup> ~~and~~  
of which occupy parts of the body much  
more liable to change by successive  
generations, than the skin.

~~Should it be said~~ <sup>no</sup> ~~that~~ <sup>the</sup> infectious quality exists

V But it is infectious - white  
women become dark col<sup>d</sup> after  
sleeping long with black men, more  
especially if they have children by  
them. Of this I have heard of two  
instances, the one in Penn<sup>sa</sup> -  
the other in Carolina.



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in this color of the <sup>519</sup> African negroes, I  
answer that this is the case with the  
Disease at present in many parts  
of the world. <sup>It has</sup> ~~so~~ to ceased to be commu-  
nicated by Contact. V

Should it be said that the negroes  
are as healthy & long lived as other  
people - I answer - that ~~as~~ no local  
diseases of the skin affect ~~the~~ the general  
health of the body, or the duration of  
human life. Dr. Thury says that the  
Itch was very common in America,  
speaks with surprise of the longevity  
of many people who were affected w:  
it. In the negroes who are now  
in this country, perhaps it w:

✓ The color in the negroes is seated  
in the Reticularium. —



be proper rather to consider the black color as an effect of an evanescent disorder. The existence of a solitary symptom of a Disease after the disease is cured is no uncommon thing. in the A dark color often continues ~~a~~ <sup>many</sup> days on the tongue after the cure of a bilious fever, & ~~the~~ red marks often appear on the skin many months after the recovery from the small pox.

The theory I have endeavoured to establish leads to two very natural reflections. 1 That all the claims of superiority of the Whites over the blacks on acc<sup>t</sup> of their color are founded in ignorance & inhumanity. If

✓ equality of mankind.

3<sup>rd</sup> Is the black color of the negroes a disease,<sup>2</sup> ~~and are all diseases curable?~~

- then let humanity & science combine their strongest efforts, & endeavour to discover a remedy for it. Nature has lately unfolded a banner upon this subject. ~~I invited us to her~~ <sup>begin</sup> ~~Standard~~ She has ~~performed~~ several spontaneous cures of this disease of the skin in several black people in this country. In a certain Henry Knapp who lately travelled thro' this city, and was exhibited as a show for money, the cure was nearly complete. The change from black



the color of the negroes be the effect of a disease, instead of inviting us to tyrannize over them, it should entitle them to a double portion of our humanity, for disease all over the world has always been considered as the signal of compassion. —

2 If the theory I have delivered should reach us <sup>as persons of a different kind,</sup> the necessity of keeping up that ~~prejudice~~ <sup>prejudice</sup> against ~~association~~ <sup>association</sup> such connections with them as would tend to infect posterity with any portion of their disorder. — This may be done upon the principle I have mentioned without offering any violence to humanity, or calling in question the original descent and natural

to a natural white flesh color began  
 about  $\frac{5}{4}$  years ago at the ends of his  
 fingers, and has extended gradually  
 over the greatest part of his body. The  
~~proot~~ ~~hair of the~~ which formerly perforated  
 the cuticle in this man has been  
 changed into hair. — No change in the  
 diet, drinks, dress, employments or  
 situation of this man, had taken  
 place previously to this change in  
 his skin. — But this fact does not  
 militate against <sup>artificial</sup> attempts to dislodge  
 the color in negroes, any more than  
 the spontaneous tans of many other  
 diseases militate against the use





of evidence in the practice of Physic.

To direct <sup>our</sup> inquiries & experiments upon this subject, I shall throw out the following facts.

1 In Henry ~~exactly~~ <sup>first</sup> crop, the color was discharged from the skin in those places first on which there was most pressure from ~~nothing~~, or friction from labor, as on <sup>the trunk of</sup> his body, ~~the thigh~~, and on his fingers. The destruction of the black color was probably occasioned by the <sup>coloring matter of</sup> absorption of the recte mucosum, or perhaps <sup>by</sup> the recte mucosum itself, & friction for pressure, it is well known aids <sup>absorbing</sup> the action of the Lymphatics in every





part of the body. — It is from the latter  
 I can see, that the palms of the hands  
 of negro women who ~~stand~~ spend their  
 lives of at a wash-trap are generally  
 as fair as the palms of the hands in  
 labouring white people. —

2 Depletion ~~has no indirect~~ whether  
 by ~~Dr.~~ purging, or abstinence has a  
 certain effect in lessening the black  
 color in negroes. ~~As many facts induce~~  
 me to believe <sup>and</sup> it is ~~an~~ <sup>an</sup> alterative ~~med.~~ it wd  
~~be~~ <sup>very</sup> ~~the same~~ <sup>deposits</sup> a similar change tho' of  
 a more temporary nature has often  
 been observed in negroes from the  
 influence of fear. —

4 Dr Beddoes tells us that he has  
 discharged the color in the black



in them produce a large portion of happiness in the world. We shall 1 destroy  
One of the arguments in favor of the  
~~color~~ enslaving the negroes, for this  
Color has been supposed by the ignorant  
to mark them as objects of <sup>the divine</sup> ~~divine~~  
~~divine misery from the~~ judgment, of heaven,  
~~judgment & misery~~  
& by the learned to qualify them for con-  
-stant labor in hot & unwholesome  
climates. 2 We shall add greatly to  $\frac{2}{4}$   
happiness, for however much they pre-  
-tend to be satisfied with their color, there  
are many proofs of their preferring that  
of the white people.

3 We shall under the belief of the  
whole human race being descended  
from one pair, ~~but~~ more easy, &

cool of negroes by infusing it in  
 digested muriatic Acid, & applied it in  
 by the same means in the hand of a  
 negro man. see H. whitt's fact p. 120

5 ~~A citizen of Phila~~ A citizen  
 of Philad<sup>a</sup> upon whose veracity I have  
 perfect reliance assured me that he had  
 once seen the skin of <sup>one</sup> the side of the  
 cheek inclining to the chin, and of  
 that part of the hand in a negro boy  
 changed <sup>by the juice of unripe peaches</sup> in ~~the same~~ by his eating  
~~unripe~~ of (which he was very fond  
 of eating) falling & resting frequently  
 upon those parts of <sup>his</sup> the body.

To encourage attempts to cure  
 this disease of the skin in negroes, let  
 us recollect that we shall by succeeding



universal, and thereby not only add  
weight to the Christian revelation, but  
remove a material obstacle to the exer-  
cise of ~~its~~ <sup>that</sup> ~~that divine precept~~ <sup>its</sup>  
universal benevolence which is in-  
culcated by it.

5/9 1840

V ~~Old age~~ Old age is the effect  
of such a decay of or loss of the  
sensitivity & contractility of the  
body, as to render it incapable  
of emitting receiving & propagating  
the motions of life. This such is the  
change in this respect induced on  
the Solids, that ~~they~~ some of them  
viz: the arteries are sometimes con-  
verted into bone. Excitement & exit?  
are both exhausted in old age, and death  
from old age is nothing but a general  
palsy. I said formerly it began first  
in the Eyes, & Sphincter of the Bladder.



~~equality of mankind.~~

I intended to have proceeded in the history of <sup>other cutaneous diseases and of all</sup> ~~all~~ the proximate causes of <sup>that are</sup> local diseases, set down in our syllabus, but our time, <sup>for lecturing</sup> being expired, I ~~was~~ <sup>am</sup> unable to enter upon them. I have kept back of my principles <sup>in medicine</sup> from you - and if these have been well understood, they will enable <sup>you</sup> with the help of books to account for ~~the~~ all the diseases that are omitted in our lectures.

~~I shall~~ <sup>of the signs of Diseases</sup>  
I spoke fully in the prognosis of fevers.  
I shall only <sup>inquire into the</sup> select ~~for the~~ proximate cause of old age & death.  
~~local diseases - those of the mind,~~  
~~afterwards, close with an acc<sup>t</sup> of~~  
~~the proximate of Death.~~  
in practice of Physic &c 12. -

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## On the Cause of Death.

~~we have not yet~~ <sup>some time</sup>  
 we have spent ~~in~~ <sup>in</sup> inquir-  
 -ing into the history of the body in  
 its healthy & morbid states - with a single  
 view to cure its diseases, and thereby  
 to elude <sup>the</sup> premature <sup>attacks of</sup> death. But in  
 spite of all that our Science or Art can  
 do, we are still unable to arrest the  
 ravages of this great destroyer, in infancy  
 - childhood - youth - and middle life.  
 It is true - we have been able to limit  
 the number of his conquests <sup>by</sup> to ~~reach~~  
 the discovery & use of many valuable  
 remedies - and I look forward with  
 hope <sup>& confidence</sup> ~~and pleasure~~ to the time, when  
 the more improved states of science,





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reason & religion, shall either prevent,  
or cure all the diseases which now  
cloud our skill, and thereby render  
death from old age the only outlet  
of human life. —

Our first inquiry upon this subject  
shall be — what is the final cause of  
death? — Why has it been made necessary  
for our bodies to undergo a dissolution &  
mingle again with its parent earth?  
— It belongs to the Divines to assign  
moral reasons for this catastrophe of  
of our bodies. It shall only assign a  
natural reason for it. — It would seem  
that our bodies derived from the Fall  
of man the seeds of all the disorders  
which now <sup>infect &</sup> distress it. They resemble

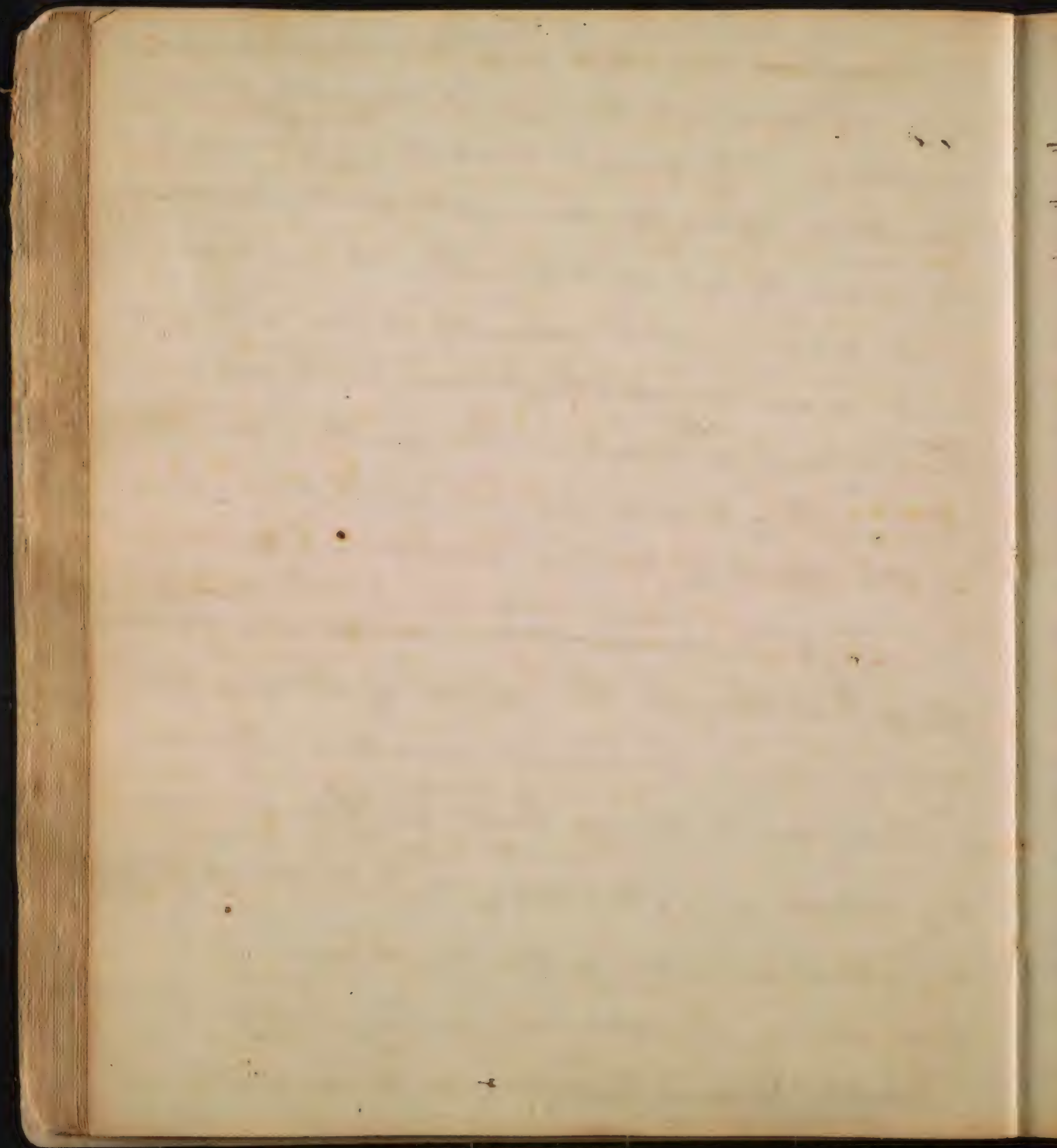




~~Therefore an old and tottering house~~  
 which cannot be made <sup>stronger</sup> tenable by any  
 repairs. The divine Architect like a wise  
 builder, takes it down altogether in order  
 to order to refine & purify its materials,  
 and afterwards to rebuild it in a new  
 and more durable form. Let us not  
 cease ~~not~~ <sup>to</sup> therefore deplore the death of our bodies.

How this event terrible as it appears  
 is the effect of divine wisdom (Goodness).  
 (at present)

Life I have said ~~is the effect of stimuli~~  
~~acting upon animal matter.~~ <sup>such</sup> is therefore nothing but a Change induced  
 by disease or old age <sup>on the body</sup>, as to prevent this  
 matter emitting the motions of life.  
 no more happens to the body by  
 death than happens to a Violin





when its strings are too much relaxed - or stretched - or broken. This destruction of the capacity of the body to emit life <sup>by</sup> ~~in~~ diseases is produced by the abstraction of the stimuli which support it, particularly of food by famine, & of blood by hemorrhages.

~~There~~ no more happens here than <sup>what occurs in</sup> the abstraction of the bow of a Violin, destroying the further emission of sound.

2- <sup>Death is produced</sup> By the excessive force of stimuli of all kinds. no more happens here than occurs from too much pressure on the strings of a Violin preventing the emission of a musical note, or from its strings being overstrained.

3- By ~~the same~~ too much relaxation. - no more occurs here than occurs in the extinction of sound by the total





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relaxation of the strings of the Violin.

4- By an error in the place of certain fluid or solid parts of the body. no more occurs here than that would occur from fixing the strings of the Violin on ~~the~~ <sup>its</sup> body of the without the support of the bridges which raise it an inch from that body.

5- By ~~continuous~~ <sup>the</sup> action of certain vitiated fluids upon parts of the body which emit most forcibly the motions of life. no more happens here, than what is produced by ~~fixing a piece~~ <sup>involving the</sup> strings of a ~~piece~~ <sup>Violin</sup> in a piece of Wax.

6 By wounds & ~~destruction~~ <sup>the solution</sup> of solid parts of the body. no more occurs here than when the crucifiers

✓ The convulsions & preternatural  
strength which sometimes precede  
death, are the <sup>effects of the unequal action</sup> effects of Stimuli  
<sup>partial</sup> acting upon <sup>the remains of the</sup> partial excitability  
of the system.

✓ In short -  
no more happens to the body from  
the destruction of its consistency & cohesion  
than happens to a loadstone which when  
broken to pieces ceases to possess the  
usual qualities of a magnet.

The <sup>formation</sup> dissolution of the body by  
death is generally accompanied by



of sound is prevented from a Violin,  
by cutting its strings. —

& lastly death is produced  
By rigidity and even an ossification  
of the Solids. Death from old Age arises  
from this Cause. — The Solids <sup>here</sup> refuse  
to yield to the impressions of Stimuli  
from within & from without. NO  
more happens here that would happen,  
if a Stick - or a pipe stem were placed  
in the room of Cat gut upon the body  
of the Violin. —

Death then <sup>is</sup> ~~is~~ nothing but  
an inability or incapacity <sup>from a variety of causes</sup> of an animal  
matter to receive, <sup>& emit</sup> ~~and~~ preserve the  
vibrations &  
motions of life. — ✓

Here then we quit the human  
body — <sup>pale -</sup> ~~cold~~ motionless — <sup>pale -</sup> cold — and

pain, but there many exceptions  
to this remark. This I took notice  
of it formerly, and added that I believe  
death often came on <sup>like sleep</sup> with pleasurable  
sensations. The nature & seat of a  
disease has a great influence upon  
the pain of dying. <sup>Death from</sup> Disorders of the  
bowels is ~~far~~ <sup>more</sup> perhaps the most pain-  
-ful than ~~for~~ when it is seated in  
any other part of the body. The marquis  
of Mirabeau who died of an inflam<sup>n</sup>  
in his bowels declared that he "felt in  
a moment the pangs of a thousand  
years". Next in pain is death from  
a disease in the ~~bladder & kidneys~~ <sup>kidneys</sup> &  
bladder - then the head - <sup>last of all</sup> ~~lastly~~ <sup>in</sup>



tending by putrefaction ~~to a~~ <sup>with its native</sup> ~~to a~~ <sup>earthly</sup> matter. — we are soon to  
 be separated, ~~from each other~~ — never  
<sup>probably</sup> to meet again, <sup>probably</sup> in the exact relation  
 we sustain to each other upon the  
 seats we now occupy in this room.  
 — not so — the particles of matter  
 which compose our bodies. After  
 lying in the grave till the seeds of  
 weakness and disease, are totally ~~destroyed~~,  
 eradicated from them, — they shall again  
 be united, and every particle which  
 composes them shall occupy its former  
 place in a new and a ~~more~~ durable  
 form. — The analogies of this <sup>revival &</sup> reunion  
 of the particles of our bodies are so  
 numerous in the works <sup>both of</sup> nature

in the lungs & liver. I shall hereafter  
in the Prognosis of fever describe the  
Symptoms of death, & shall mention  
the means of lessening or destroying  
its pains Altogether - for this  
is an <sup>essential</sup> part of a Course of lectures  
on <sup>the</sup> practice of physic. It has hitherto  
been too much neglected,  
from a mistaken idea that the  
business of a Physician is only  
to cure Diseases. His business  
is to lessen human misery in all  
the forms in which it attacks the  
body of man. I shall only add  
here that Death from old age  
is attended with no pain. It is



It art, that to a candid philosopher  
~~it would not~~  
~~and even one~~ have been deemed a thing  
 incredible that God should raise the  
 dead, - even tho' revelation had been  
 silent upon the subject. - To a Christian,  
 the prospect of the resurrection of the  
 body <sup>has ever been considered as</sup> ~~is calculated to~~ <sup>banish</sup> ~~to~~ <sup>banish</sup> ~~the~~  
~~of the strongest pillars of his hope, and~~  
~~into cheerful hope, and to support the~~  
~~the best comfort in affliction~~ <sup>bodily af-</sup>  
~~mind up under the~~  
 - fliction. - But to the ~~vision~~ <sup>vision</sup> of a Physician,

this prospect of a future reanimation  
<sup>is calculated to afford</sup> ~~not only~~ a  
 of the body, ~~most~~ <sup>double</sup> ~~afford~~ <sup>portion of</sup> ~~double~~ <sup>comfort</sup> ~~every~~ <sup>time</sup>  
~~the~~ <sup>the</sup> ~~comfort of a Christian~~ <sup>but the</sup>  
~~triumph~~ <sup>triumph</sup> ~~he beholds~~ <sup>an amiable & virtuous</sup> ~~patient~~ <sup>supported</sup>  
~~support of a philosopher~~ <sup>on</sup> ~~crowds of his friends & fellow citizens~~ <sup>wasted</sup>  
~~from his hands~~ <sup>by</sup> ~~disease and~~  
 death. He considers the triumphs of  
<sup>in this case,</sup> ~~death~~ <sup>as</sup> ~~transitory~~, and ~~that~~ <sup>he</sup> looks

comes on with the gentleness  
of sleep. In a more improved state  
of mankind, death for sickness is  
predicted in the scriptures. Death  
from old age will be universal,  
and of course the pains which  
now attend it will be unknown.

are not a  
The Signs of death - ~~not coldness~~ cessation  
not coldness of the body, not  
of pulse - ~~stiffness~~ nor even putrefac-  
tion - <sup>taken together</sup> but a long continued appearance  
of all those signs <sup>of death</sup> ~~found~~ - Haller de  
especially putrefaction.



forward to the joyful morning of the  
 resurrection when his ~~dejected~~ patients  
 and fellow citizens,  
 shall awake from the slaps of death,  
 pure - healthy - and <sup>capable</sup> for ever afterwards  
~~incapable of losing~~ of receiving, and  
~~not of maintaining~~ an immortal  
 retaining the ~~principle~~ of life. —

With this we close our lectures  
 for the present year. Accept of my  
 thanks for the attention with w<sup>ch</sup>  
 you have honoured them. I have  
 only to excuse their deficiencies, &  
 ascribe them to the ~~smallty~~ difficulty  
 of my subjects. I ~~cannot~~ examine  
 the new principles & practice I have  
 taught you with brevity & candor,  
 and if I have been mistaken in any  
 thing — convince me of my error

Before I conclude such of  
✓ I have only to recommend to you  
as ~~far as~~ <sup>as far as</sup> are ~~about to take a~~  
~~last to visit in~~ about to take a  
final leave of the University, not to  
suffer the ~~toils of~~ practical duties of  
your profession to interfere with the  
study of medicine. A Physician who gives  
over reading when he enters into practice, will  
often be less wise at 50, than at 25. It is in  
consequence of having observed how much  
Practitioners of Physic are disposed to lay aside  
their books, that I have sometimes proposed  
that Degrees in medicine should be given only  
for a limited time, and that <sup>they should be</sup> ~~a Physician's~~  
~~status~~ renewed once in ~~five or~~ seven years  
upon an examination,  
provided it appeared, that the Candidate had  
lost no part of the <sup>knowledge</sup> ~~same~~ during that period  
which entitled him to his first degree.



I regret that the peculiar difficulties  
of my <sup>new</sup> professorship, and my professional  
engagements have deprived me of the  
pleasure of a more frequent private  
intercourse with you during the winter.  
— I am sure that I should have gained  
both entertainment & instruction  
from it. I beg you would command  
my services at all times. With a  
heart overflowing with best wishes  
for your prosperity, I bid you an  
affectionate farewell.





However unpopular<sup>533</sup> they may be in this city,  
~~They~~ I have had great pleasure  
in hearing that they have been adop-  
-ted in ~~some~~<sup>several</sup> of the West India Islands,  
and in some parts of Great Britain  
& Germany. It will be no objection  
to them with gentlemen who know  
human nature to observe that  
they are ~~opposed~~<sup>not</sup> opposed, for  
rejected by my Brethren in this  
city. One criterion <sup>these principles</sup> ~~they~~ people  
~~and the~~ of their being true, and  
that is, they lead to a more  
~~simple, a more summary, &~~  
~~a more~~ successful mode of treat-  
-ing all diseases <sup>than any that has been proposed.</sup> The gentlemen  
who oppose them, have been





forced to acknowledge ~~that~~ the  
 truth of this remark - but they  
 endeavour to <sup>influence</sup> ~~operation~~  
 of it, in favor of our principles,  
 by asserting, that <sup>from</sup> a strange dis-  
 tribution of diseases in our city  
 such as are mild & trifling  
~~now employed only in~~  
 only, fall to my share, while  
<sup>all</sup> the difficult and incurable dis-  
 cases <sup>all</sup> fall to the share of  
 my Brethren. You Gent: can  
 contradict this <sup>assertion</sup> ~~calumny~~. You  
 have seen <sup>the most acute cases of</sup> Pneumony - yellow fever,  
 Epilepsy - Dropsy, ~~and~~ Contusion of  
 the brain & pulmonary Consumption  
 also the most obstinate cases of interm. fever  
 all ~~cured~~ completely, or nearly  
 cured by Remedies, which have





the  
 been the result of principles <sup>ch</sup> which  
 I have ~~have~~ ~~been~~ taught in my  
 taught ~~in these~~ ~~times~~. — ~~being~~

Antiquities. as  
~~in~~ the corruptions of the modern  
 governments have rendered <sup>an</sup> the opinion  
 universal, that <sup>political</sup> revolutions <sup>have</sup> become  
 & inevitable; so the ignorance, errors,  
 fraud, ~~and~~ imposture & impudence  
 & murders,  
 which prevail every where in  
 medicine, ~~loudly~~ <sup>have</sup> ~~call~~ <sup>rendered an opinion</sup> with equal  
 nearly as universal, that  
~~for~~ ~~reason~~ ~~for~~ a revolution <sup>is</sup> ~~is~~  
 equally necessary & inevitable  
 the principles & practice of Physic.  
<sup>arduous</sup> ~~whether~~ this business has already <sup>been</sup>  
~~by~~ ~~is~~ ~~the~~ ~~hands~~ ~~of~~ a few men  
 commenced in this city. The pillars  
 of ancient prejudice <sup>in</sup> <sup>medicine</sup> already  
 have been shaken,  
 but whether the great fabric of  
 error & falsehood shall be overturned,





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and a single republican <sup>of medicine</sup> temple <sup>can</sup> be  
be erected in its room, depends wholly  
upon the <sup>new</sup> principles & practice which  
have been <sup>here</sup> taught ~~here~~, being adopted  
and supported in other parts of  
the United States. ~~There they must~~  
~~languish, for a while, for reasons that~~  
~~are too obvious to be mentioned.~~

To encourage us to persevere  
in this enterprise of humanity,  
let us recollect two things. 1<sup>st</sup> That  
<sup>in acquiring</sup>  
industry, & candor ~~in acquiring,~~  
<sup>in</sup>  
~~have~~ communicating knowledge,  
will supply the place of splendid  
abilities, and 2<sup>ly</sup> that <sup>the</sup> divine  
Supreme Being





in conveying<sup>53</sup> new & important  
~~providence generally~~  
of weak & unworthy instruments  
blessings to mankind, frequently  
makes use of the weakest, and  
most unworthy instruments  
for that purpose, in order that  
the <sup>gratitude</sup> ~~honor~~ & praise <sup>due</sup> for these  
blessings may be wholly his own.

go back to 532 -  
opposite side. -

V Under this gent. I shall introduce  
not only an explanation of the causes  
of the signs of diseases, but make  
such inferences as from them upon  
the probable issue of a disease in  
life or death <sup>as have, been the result of my own</sup> The prognosis in diseases  
<sup>Observations.</sup>  
is by no means a part of the duty of  
a Physician. It ~~was~~ crept into medicine  
when the profession of a the Priest, &  
the Physician were united together. The



of the signs of disease —

1 as they appear in partial debility,  
direct & indirect.

I need hardly name these signs of debility. They are an inability to perform the motion. I exclude pain in motion or exercise from debility, for pain is always the effect of morbid excitement.

The signs of debility whether direct or indirect are so exactly the same,

that they can only be distinguished <sup>its</sup> by taking into consideration ~~the~~ causes — and the habits <sup>its</sup> stages ~~of the disease~~ it attacks.

when these circumstances are attended to there will be no danger





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of mistaking them.

The debility is partial in most cases affecting some one of the systems more than another. The morbid excitement ~~about~~ generally follows in that system only which has been <sup>even</sup> exclusively debilitated. When all the systems have been debilitated, morbid action takes place in <sup>but a</sup> ~~the~~ part of them upon the application of exciting causes to them. Remember always disease is local. V

2 of the signs of diseases in the pulse. +

① The blood vessels <sup>occupy the highest</sup> ~~are the primum~~ rank in point of utility & importance ~~in the~~ <sup>in</sup> human body. It is highly proper

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therefore to seek for the signs of health  
 and life in them above every other  
 part of the body. The <sup>pulse</sup> ~~pulse~~ is to the  
~~blood vessels~~ not only, indicates the  
 state of the blood vessels, but from their  
 intimate connection of with all the  
 other systems, it indicates more or  
 less all <sup>their</sup> ~~its~~ morbid Affections. In  
 short, the pulse is to the body what  
 the dial plate & hands are to a watch.  
 -It tells us <sup>nearly</sup> all that is going forward  
 in the body. This is the above all other  
 signs ~~the~~ barometer - of a measure of diseases.  
 Physicians have often been  
 distinguished by their predilection to  
 particular symptoms by which  
 they judge of the state of the system.

<sup>one</sup>  
+ In <sup>our</sup> introductory lectures I mention  
the difficulty of relying upon any one  
of them. [repeat them]

V It is somewhat surprising that  
Hippocrates & Celsus knew and say  
so little about it. Galen was the  
first Physician among the Ancients  
who attended to it. ~~at~~



~~These are~~ have been, & ~~these are~~  
~~for~~ Some have chosen the <sup>tongue,</sup> ~~the~~  
some the respiration, some the  
countenance & some the excretions  
of Urine, feces & sweat. ~~mine~~ my  
<sup>mode of practice</sup> rejects none of these signs,  
but it fixes ~~with~~ its principal  
attention upon the pulse. <sup>my</sup> ~~my~~  
pupils therefore I hope ~~like~~ the  
~~for~~ while the ~~followers of~~  
will be known every where by their  
knowledge & predilection <sup>to</sup> of the pulse  
in forming a judgement of diseases. ✓

~~The~~ In <sup>further</sup> considering this subject  
I shall 1 mention the facts which  
belong the history of the pulse in  
its natural state. 2 I shall mention

V The pulsations in this natural state  
of the pulse in point of frequency, are ~~at~~  
equal intervals - soft - open <sup>but</sup> ~~and~~ vigorous, and  
free from a sense of resistance.



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all its varied states and  
3<sup>ly</sup> Delivers a few directions for the  
best manner of discovering these  
states by the fingers.

I - The natural state of the pulse  
in ~~most~~ <sup>adults</sup> people in point of frequency  
in middle latitudes is ~~about~~ between  
60 and 80. Its medium is 66. ✓  
~~the force~~ But the following circumstan-  
ces have an influence upon its  
frequency, <sup>& in many instances upon its force.</sup> ~~as well as its~~

1 Age. It is from 130 to 140 on  
the day of the birth of a child. During  
its first year it is from 108 to 120.  
During the 2<sup>nd</sup> from 90 to 108. Du-  
ring the 3<sup>rd</sup> year from 80 to 108.

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It continues at 80 to 108 during the 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> years of its life. In the 7<sup>th</sup> year it falls <sup>from 90 to</sup> to 72. At, and after 12, it is the same as in adults which is <sup>from 45 to 50</sup> it is rarely from 60 to 80. In old age, it becomes slow, and intermitting. This is so much the case that a pulse perfectly regular in a very old man is a sign of a disease. The slowness in some cases, descends to 42. 30 & even 26 in some old people, according to Dr Heberden.

2 Sex influences the frequency of the pulse - It is always quicker in <sup>women</sup> ~~men~~ than in <sup>men</sup> ~~women~~.

3 Different States of Society, or

+ Dr Douxion Lavoie a physician lately from Trinidad informed me (July 24. 1807) <sup>in</sup> ~~last~~ <sup>of 1807</sup> Summer, that the pulses of the Indians on that Island, and on the Coast of South America, were uniformly less frequent, than the pulses of the white inhabitants of those Countries. In the former it from 55 to 60 - in the latter from 65 to 68 in a minute.

# ~~see~~ ~~millwright's~~ ~~report~~. The same  
result took place in the State of Georgia in  
a number of exp<sup>s</sup> <sup>at my request</sup> made <sup>at this</sup> by millwright  
upon the pulses of a number of Indians.  
They were it is true higher than 60, but less  
frequent than <sup>in</sup> the traders who lived among  
them - and still less frequent than in the  
civilized people who attended the treaty w<sup>th</sup>  
Col. Hawkins <sup>in</sup> founding <sup>at 40 in many cases</sup> them. I wish these <sup>facts</sup> to be remembered for ever  
he made upon them. <sup>th</sup>  
Colney has contradicted it in his view of  
a days falsely Dr Barton was present at ~~my~~ <sup>the</sup>  
America. He examined the pulse of an  
Indian chief only, ~~who he whose habit~~ who  
lived occasionally among civilized people, &  
was <sup>in two cases</sup> =



of civilization influences the pulse.

It is slow in all savages who <sup>want</sup> ~~use~~

~~not~~ the stimulus of thot & labor

to act upon their bodies. ~~But~~ <sup>In</sup>

<sup>in this city</sup> 8 Indians out of 10 in an experiment

~~made in the presence of 6 students of medicine~~  
~~I made a few years ago, I found~~

~~the pulse beat 60 strokes~~  
~~in a minute.~~ but 60 strokes

in a minute. ~~to~~ One of the persons

in whom it was more frequent,

had been sitting by a fire, and the

Other I found afterwards was the

Son of a Frenchman, by an

Indian mother. ~~to~~ go to 1. of new

writing.

~~Country~~ The inhabitants of

the country whose minds are

V It is quicker in a warm, climate  
than in a temperate & cold climate, & it  
is quicker in new comers in the W Indies  
than in old inhabitants, - and in newly  
imported, than in old slaves under equal  
circumstances of age. Eg: In <sup>as white</sup> new comers  
in Demerary - the medium pulse of the  
<sup>(Lecteria pacifica)</sup> pulse in a heat between 90 & 100 is 82 -  
In our old Lettles 70 - in a newly arrived  
slave 88 - in an old slave 82 - according to  
Dr Whistholm vol II. p 468.



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but little excited by constant business,  
news, and conversation than the  
~~inhabitants of large towns, the pulse~~  
have slower pulses than the inhabitants  
of large cities. — I wish these  
experiments could be extended to dif-  
ferent nations, & ~~dis~~ to all the differ-  
ent occupations of men.

Age influences the frequency of the  
pulse. It is ~~more~~ quicker in youth,  
than in tall men. In very large men it  
has been observed to be but 55. Haller

5. Climate & season influence the  
frequency of the pulse. ~~It is about 100 in the~~  
rest of the year. It is slower  
in a ~~the~~ cold climate than a warm

one. In Greenland it is seldom above  
60. It is slower in winter, than

~~see this before vol. 11 p 668~~

= When at home upon ordial diet. In this  
man he says his pulse was as quick as his own,  
- This I dare say was true. I perceived the same  
thing in several of the Osage Indians who <sup>in the fall</sup> ~~last~~  
1804 visited this city, but it was after they had  
had their senses acted upon the new lights & sounds  
& smells of our city & ~~stayed~~ for several days, & their  
beats ~~blood vessels excited by~~ <sup>by</sup> unusual quantity of ordial  
above ordinary. +

an exalted state of the system. This  
was  
is the case in our <sup>upon the Indians.</sup> ~~own~~ Clymers experim<sup>t</sup>.

In a ~~case~~ person in whom it was 64 at 7 o'clock 76 mid  
71 6 p.m. In another 52.7 at 6 o'clock 65 m. 56-6 p.m. midday  
In a third 67.7 at 6 o'clock 76 mid 72 6 p.m. midday.

+ In this ordinary & natural state, the fact  
I believe is uniformly true. I shall say presently  
that the exercises of the understanding <sup>of the Indians</sup> ~~of the Indians~~  
affect the pulse; now as the understandings of Indians  
are ~~ordinarily employed~~ generally in a quiescent, or  
torpid state from the limited number of subjects  
which occupy them, & those subjects only for a  
short time, it is no wonder their pulses are slower, or  
less active, than the pulses of civilized people.



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in summer. It even varies in with the  
emotion of heat & cold in all the months of the year.  
6 Different times of the day influ-  
-ence the frequency of the pulse = ~~is~~

= It is slowest in the morning - increases till mid-  
-day - Is stationary till 2 o'clock; - when it descends  
till 8 o'clock; - then it rises a little. It is again  
reduced in sleep; - but rises again in frequency till  
two hours before morning, when it again descends  
till 7 o'clock - <sup>at which hour it is</sup> ~~after which it rises & descends & is~~  
at its greatest weakness <sup>from 4</sup> ~~at 7 o'clock~~ It gradually  
rises till twelve or midday, & thus performs  
the same revolutions every day. I shall hereafter  
say these changes in the pulse in the night are  
influenced by a difference in the weight in the  
Air - as discoverable by the Barometer.  
I turn up this paper





7 ~~Light has a great influence upon the~~  
The pulse ~~is~~ <sup>is</sup> ~~increases~~ and lessens with different  
degrees of light and darkness. It is great consequence  
to attend to this fact in judging of a disease by  
the state of the pulse, and in prescribing for  
diseases particularly those of a febrile nature.  
Light and darkness are both hurtful & useful  
according to the state of the system in which  
they are applied. I shall hereafter explain  
certain phenomena ascribed to human  
attraction, chiefly to the effects of light &  
darkness upon it.

~~Barrow, and Gaspar~~ <sup>is a difference of</sup>  
According to Dr Haller, there ~~are~~ <sup>is</sup> 15 strokes  
between the morning & evening

viz: 65 & 80. In some cases there is a  
diminution of frequency at night.

It differs as to frequency in the

sleeping, & waking states. It is ~~much~~  
from absence of the energy or stimulus of the mind or  
light & motion. It is from 80 to 90  
lowest in sleep. After waking, it soon falls to 70 & below it.

D. Different positions of the body

affect the frequency of the pulse.

It is slowest when we lie on our  
backs - It is quicker when we sit



11<sup>+</sup> Food and drinks affect the pulse. It is quickened by a full meal, and by distilled & fermented liquors. It is reduced in its frequency by fasting.

✓ 10 Different positions of the Arm affects the pulse. It is much reduced in frequency by being uncovered, and by the pressure upon the body upon it in bed, when the patient lies on his side. + see above

120 Exercise quickens the pulse a pulse which is 64 in a person while sitting, is 68 when standing, to 90 & 112 in many people.

78 walking at the rate of five miles an hour - 58 when walking four miles an hour.

140 to 150 when running.

15<sup>th</sup> Pregnancy influences the pulse. It is more active than natural at as soon as conception



up, and quickest when we are in  
an erect posture. V

12 ~~The~~ The exercise of the Understanding & of certain  
all the passions of the mind affect

the pulse. The stimulating passions  
eg Anger increases to 104 strokes in a minute.  
give impart quickness & force to it.

The simply ~~de~~ sedative passions as  
grief, fear &c reduce it in frequency  
& force, provided it be felt before

otherwise it is accelerated by stimuli  
acting upon ~~accumulated~~ <sup>the</sup> excitab.  
which has been accumulated by those

debilitating passions. go to 1. now writing

13. ~~Conversation quickens the pulse~~  
20. ~~It~~ It belongs to the natural history  
of the pulse to take notice, that in  
some persons in good health, it is  
proternaturally slow I was (Chippole)

takes place, and this activity is increased at the times  
in which the menses ordinarily flow.  $\neq$   
even in pregnant women as well as others.  
Such a pulse is ~~marked~~ indicates a  
high fever at 60.

$\neq$  In the Rev<sup>d</sup> Mr Clayton of Liverpool  
it was at 100 - until he had a severe  
fever - ever after <sup>wh</sup> it was between  
60 & 90. Dr Whyt mentions a person in whom  
it was 120 in its natural state. In a fever in this  
person it was 180 when convalescent it was  
140 when lying & 220 when in sitting posture.  
It is further observed with difficulty in  
very fat people from fat compressing, or  
burying the artery.

(a) - a kind provision of the Author of nature!  
- we see external diseases, but internal ones  
are concealed from us.

16  $\neq$  Certain <sup>and</sup> in fluence the state of  
the pulse - as opium - Bark - Blisters - the  
last according to parts to which they are applied.  
See Borden. Vol 2 p 22. 17 a Quack 18 Bear  
had over to 07 549



I have read of its beat about 548 & with good health  
but 407 In others it is preternaturally  
quick [Mr. Peters 100] In some the  
artery, we commonly feel, runs  
above the Radius parallel with the  
Thumb. It is of consequence to know  
these deviations from nature, when  
they occur in our habitual patients.  
Indeed a great advantage would  
arise from knowing the exact  
state of <sup>the pulse</sup> every patient we attend  
in its ordinary & healthy state.

II. We come next to inquire into  
the morbid states of the pulse. ~~But~~  
~~one 548~~  
It departs from order and health,  
1 In frequency, and quickness. By  
frequency is meant the number of



+ This subject ~~does~~ in another place; at present  
 I shall only <sup>repeat</sup> remark that the sympathy  
~~with~~ between the pulse & diseased parts is  
 not with exact spots diseased, but with  
 the parts contiguous to it. In inflam<sup>n</sup>: ~~for~~  
 I shall say hereafter the ~~more~~ circulation is  
slower than in healthy parts. It even ceases  
 altogether in some cases. ~~This~~ This has been  
 observed by a microscope. The increased action  
 is a turgor, or lag behind the inflamed part, & it is  
 this action which produces corresponding <sup>morbid</sup> actions  
 in the radial artery. The absence of it produces  
 what has been called <sup>or atrophy</sup> papery inflam<sup>n</sup>: - It is ab-  
 sent in all those cases in which we find signs  
 of inflam<sup>n</sup> after death, without previous fever,  
 or morbid action in the pulse. -

Let not ~~the~~ exceptions that have <sup>been</sup> ~~not~~  
 mentioned to the Union in the pulsation  
 of the arteries call in question the advantages



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